ABSTRACT

An optical head reproduces optical disks of different disk plate thickness t1 (0.6 mm) or t2 (1.2 mm) by using light beams of two wavelengths and one object lens. An converging element comprises a central portion and outer portion, wherein the central portion has optimum design plate thickness of 0.6*t1 to t1 and the outer portion has optimum design plate thickness of 0.6 mm. By providing a step difference in the converging element, information can be recorded or reproduced for an information medium of disk plate thickness t1 and for an information medium of disk plate thickness t2, in a state having small side lobes. Alternatively, a step difference is provided in the object lens, and optical distance L2 from a second light source to a condensing optical system is set to 80 to 95 % of optical distance L1 from a first light source to the condensing optical system. Alternatively, only light of first wavelength is shielded or diffracted in a ring-like shape.